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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/398,639	09/17/1999	AKIHIRO IINO	S004-3771	1346

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EXAMINER

BUDD, MARK OSBORNE

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

398 639

Applicant(s)

Iino et al

Examiner

M. Bvd

Group Art Unit

2834

--The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address--

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 9-9-02.
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 34-36, 39-44 & 47-57 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☒ Claim(s) 34-36, 39-44 and 47 is/are allowed.
- ☒ Claim(s) 48-57 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

Office Action Summary

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 48-50, 52-54, 56 and 57 are rejected under 35 U.S.C. 102(a) as being anticipated by Kanda.

Claims 48-50 rejected under 35 U.S.C. 102(a) as being anticipated by Lindemann (fig. 5, 6 and 10), Susuki (figs. 1-5) or Hosono (fig. 8).

Each reference teaches a Piezoelectric stack using elements of different widths. Note that "so that each of the ---" is merely a statement of desired function which does not alter the specific structures claimed.

Claim 51 is rejected under 35 U.S.C. 102(a) as being anticipated by Culp (484) (figs. 1, 2, 4 and 7).

Claims 52-54 are rejected under 35 U.S.C. 102(a) as being anticipated by McNaney (figs. 4 and 5), Richter (figs. 1-3 and 5-9) and Imoto (figs. 1, 2, 4 and 6).

Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over McNaney, Richter, Imoto or Kanada in view of Culp (484).

Each of Kanada, Richter, Imoto and McNaney teach the piezo drive device using plural stacks of different width (length) elements. They use the thickness mode of operation. Culp

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teaches piezo stack devices can use longitudinal or shear actuation in addition to the thickness mode. Selection of which mode would have been within the skill expected of the routineer.

Thus to substitute one known mode for another would have been obvious to one of ordinary skill in the art.

Claims 39-44 and 47 are allowed.

Further cited of interest is Hanaki.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

MARY O. BUDD
PRIMARY EXAMINER
ART UNIT 212